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ABSTRACT

An evaluation was conducted of the implementation by public universities and community colleges in Illinois of state policies on student scholarship and achievement in undergraduate education. The policies were proposed in 1986 and revised in 1990 by the Illinois State Board of Higher Education in the context of state and national education reforms. State efforts included adopting admission requirements, examination of student preparation standards, and annual review procedures. Analysis of public university and community college efforts was done using summer 1994 reports from each institution. Results indicated that revised university curricula have given greater attention to students developing bachelor's level skills in communication, mathematics, and critical thinking. The most well developed components of assessment were found in writing with seven institutions reporting that they assess student writing at least once after entry. Among community colleges only 30 percent have implemented comprehensive assessment systems. Both types of institutions were making progress on comprehensive, rather than piece-meal assessment. Some institutions saw assessment as imposed from the outside rather than as an integral part of academic life allowing the institution to evaluate how well it is fulfilling its purpose. Appendix A contains the 1990 revised polices. (Contains 28 references.) (JB)

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ED 378 920

Item #6
March 7, 1995

STATE OF ILLINOIS
BOARD OF HIGHER EDUCATION

UNDERGRADUATE EDUCATION: ASSESSING COLLEGE STUDENT ACHIEVEMENT

In September 1986, the Board of Higher Education adopted policies on preparation for college, scholarship and achievement in college, and excellence in undergraduate teaching. Recommended by the Committee on the Study of Undergraduate Education, these policies focused statewide attention on the improvement of undergraduate education. In September 1990, the Board reaffirmed its priority on improving undergraduate education and updated the 1986 policies.

The purpose of this report is to examine the implementation by public universities and community colleges of the policies on student scholarship and achievement. The first section reviews the context in which the policies were developed and in which colleges and universities are implementing them. The second and third sections analyze the implementation of the policies by public universities and community colleges, respectively, as reported in their summer 1994 undergraduate education review reports. The final section draws conclusions about the implementation of the Board's policies. The Board's revised 1990 policies on student achievement, scholarship, and general education are reproduced in Appendix A.

Policy Context

The Committee on the Study of Undergraduate Education made its recommendations on general education and the assessment of student achievement in 1986 and 1990 within a context of state and national education reform. This section examines proposals and findings from national reports and studies, the actions of regional accrediting associations, and policy development in Illinois.

National Reports and Studies

In spring 1983, *A Nation at Risk* declared that the nation's public schools were sinking under a "rising tide of mediocrity." This report by the National Commission on Excellence in Education is generally regarded as the prime mover behind successive waves of school reform. A year later, in October 1984, the Study Group on the Conditions of Excellence in American Higher Education issued the companion report, *Involvement in Learning: Realizing the Potential of American Higher Education*. While acknowledging that the United States' "system of higher education...is by far the largest, most complex, and most advanced in the world" (page 1), the Study Group believed three conditions were necessary to improve undergraduate education: 1) students must be actively involved in their own learning, 2) each institution must set high standards for student achievement, and 3) students must receive continuing feedback on the achievement of these standards. Although the Study Group was not the first to call for strengthening general education, it was one of the first to propose the systematic assessment of student achievement as an integral part of improving undergraduate education.

Other proposals for improving undergraduate education followed in rapid succession: William Bennett's proposal for strengthening the humanities in the curriculum in *To Reclaim a Legacy* in November 1984, the Association of American College's proposals for restructuring the curriculum in *Integrity in the College Curriculum* in February 1985, and Ernest Boyer's vision for an integrated

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collegiate experience in *College: The Undergraduate Experience in America* in 1987. The broad dissemination of these, and similar, reports prompted individual colleges and universities across the country to reexamine undergraduate education. Most, however, set higher admission standards or reconfigured the curriculum without addressing the assessment of student learning in college.

In 1986, the fifty governors announced their own five-year agenda for restructuring American public education (*Time for Results: The Governors' 1991 Report on Education*). Annual progress reports--*Results in Education: 1987, 1988, 1989*--highlighted state action in seven areas, including undergraduate education. The governors' agenda and annual report cards led to the Education Summit between President Bush and the governors in Charlottesville, Virginia, in November 1989, which, in turn, resulted in agreement on six National Education Goals. In March 1994, these National Education Goals, expanded to eight, were adopted by the U.S. Congress and signed into law by President Clinton in the *Goals 2000: Educate America Act*. The National Education Goals are presented in Appendix B.

On first reading, the National Education Goals seem to be directed only to elementary and secondary schools. More careful study, however, reveals that the Goals envision a process of lifelong learning for all Americans: "Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship." Objectives associated with this goal make it clear that higher education is included. Substantial increases are called for in "the proportion of those qualified students (especially minorities) who enter college, who complete at least two years, and who complete their degree programs." Substantial increases are also called for in "the proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems." Although the National Education Goals Panel believed that a national testing program would be needed to monitor improvements in critical thinking, communication, and problem solving skills of college graduates, no funding has been authorized for the development of such a program.

Over the years, numerous research studies have attempted to measure the impact of the collegiate experience on students. In their comprehensive analysis of more than 2,600 research studies on the effects of college on students over the past twenty years (*How College Affects Students*, 1991), Ernest Pascarella and Patrick Terenzini found strong evidence of a positive college effect on general verbal, quantitative, and critical thinking skills; moderate to strong evidence of a positive effect on general intellectual and analytical skills, intellectual flexibility, and the use of reason and evidence in problem solving; and moderate evidence of a positive effect on oral and written communication skills.

In *Learning by Degrees: Indicators of Performance in Higher Education* (January 1995), Paul Barton and Archie Lapointe examined recent trends in Graduate Record Examination (GRE) and Graduate Management Admission Test (GMAT) scores, as an indicator of college student learning. Between 1981 and 1993, quantitative and analytical scores on the GRE General Test rose 27 and 35 points, respectively, while verbal scores were stable, even though the number of test takers increased (page 19). During this same period, mean scores on eight of the GRE Subject Tests rose, while mean scores declined in seven (page 21). Average GMAT scores also rose between 1982 and 1993. Since these tests are generally taken by graduating seniors seeking admission to graduate or professional schools, those tested do not represent the whole population of college graduates.

Barton and Lapointe's main contribution is a detailed analysis of scores earned by associate and baccalaureate graduates compared to all other adults who participated in the 1992 National Adult Literacy Study. In the study, adults 16 years old and over were tested on their ability to find, interpret, and use information in three types of written material--prose, document, and quantitative--with five levels of proficiency defined for each type. A significantly higher proportion of associate and baccalaureate graduates scored in the two highest levels in all three categories compared to all adults tested. For example, 53 percent of baccalaureate graduates and 38 percent of associate graduates

scored in the highest two levels on prose literacy, compared to 20 percent of the total adult population tested. While college graduates scored better than non-college graduates, and baccalaureate graduates outscored associate degree graduates in all three categories, a few college graduates scored at the lowest level, and fewer baccalaureate graduates than expected scored at the highest level in each category, a finding that suggests that not all colleges and universities are adequately preparing all of their students to a standard commonly expected of college graduates.

Regional Accrediting Associations

In the 1980s, all six regional accrediting associations in the United States began to revise their criteria for institutional accreditation to incorporate documentation of student learning within the accrediting process, which consists of a detailed institutional self-study followed by an on-site peer review visit. In 1989, the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools, which accredits Illinois colleges and universities, called on its member institutions to develop institution-wide programs to assess student learning as evidence of a commitment to excellence.

To implement this resolution, the Commission revised its accreditation criteria and suggested evidence to show the criteria are being met. To show that "the institution is accomplishing its educational and other purposes", institutions are asked to present such evidence as:

"assessment of appropriate student academic achievement in all its programs, documenting:
- -- proficiency in skills and competencies essential for all college-educated adults;
- -- completion of an identifiable and coherent undergraduate level general education component; and
- -- mastery of the level of knowledge appropriate to the degree granted."

To show that "the institution can continue to accomplish" its purposes, the institution's student assessment program should be "structured," "continuous," "involve a variety of institutional constituencies," and "provide meaningful and useful information to the planning processes as well as to students, faculty, and administration" (North Central Association Commission on Institutions of Higher Education, *Handbook of Accreditation, 1994-95*, March 1994). The types of evidence suggested by the Commission are nearly identical to the assessment components outlined in the Board of Higher Education's policies.

Illinois Policies

Illinois began developing policies to improve education before and during college prior to national reform efforts. Through the Joint Education Committee, the Board of Higher Education and State Board of Education began examining student preparation for college in the late 1970s. In 1985, the Illinois School Reform Act adopted the State Board of Education's *State Goals for Learning* as the competencies expected of all high school graduates. In fall 1985, the Board of Higher Education adopted high school course requirements for admission to public universities and community college baccalaureate-transfer programs as a result of its intensive study of student preparation. In 1988, a joint task force of the State Board of Education and the Board of Higher Education developed *Learning Outcomes for College Bound Students* that were based on the *State Goals for Learning*.

In adopting admission requirements, the Board appointed a Committee on the Study of Undergraduate Education to review undergraduate education statewide and make recommendations for its improvement. In September 1986, the Board adopted the Committee's recommendations. While the Board adopted the revised policies recommended by the Committee on the Study of Undergraduate Education in September 1990, only minor modifications were made to the policies on

student achievement, scholarship, and general education. These policies call for each college and university to:

- set expectations for students' development of baccalaureate-level skills of communication, mathematics, and critical thinking and establish objectives for general education and the major;
- communicate these expectations and objectives clearly to students;
- assess individual student achievement of these expectations and objectives at appropriate intervals;
- use assessment results to reinforce academic standards and promote student progress; and
- report the findings and conclusions of reviews of undergraduate education to the Board of Higher Education.

Beginning in summer 1989, public universities and community colleges reported on their reviews of undergraduate education as part of their annual Resource Allocation and Management Program (RAMP) submissions. In fiscal year 1993, the RAMP guidelines were revised to focus on one facet of undergraduate education each year over the next five years. The campus' 1993 reviews focused on student preparation for college and achievement during the freshman year, with the statewide analysis presented to the Board in March 1994 in *Undergraduate Education: Access and Preparation Reexamined*. The focus for the 1994 campus reviews was on student achievement, scholarship, and general education. Specifically, campus review reports were to address the following areas:

- Expectations for the development of baccalaureate-level skills in communication, mathematics, and critical thinking and objectives for general education at the undergraduate level, and how these expectations and objectives are translated into curriculum requirements and other learning experiences;
- Assessment of individual student achievement of baccalaureate-level skills and general education objectives (including the measures used, aggregate results, and timing);
- Campus efforts to monitor student progress and improve retention to degree completion;
- Strengths and weaknesses in student achievement and actions being taken to improve achievement; and
- Strengths and weaknesses in the assessment process and actions being taken to improve it.

The next two sections analyze the public university and community college 1994 review reports on these topics.

Public Universities

General Education Curriculum

Since 1986, each public university has revised its general education curriculum. Table 1 shows the public universities' most recently adopted all-campus baccalaureate-level skills and general education requirements. Chicago State University is proposing a new general education program for fall 1995, while the new program at Southern Illinois University at Carbondale becomes effective in fall 1996. Although the University of Illinois at Urbana-Champaign began implementing its revised general education program one component at a time each fall since its adoption, several components

Table 1

PUBLIC UNIVERSITY ALL-CAMPUS GENERAL EDUCATION REQUIREMENTS
(In Number of Semester Credits)

	Communications	Mathematics	Humanities/Fine Arts	Social/Behavioral Sciences	Physical/Life Sciences	Other	Total
Chicago State University *Proposed for Fall 1995*	6 (composition)	6	9	12	9 (includes math)	Multicultural (*embedded*)	42
Eastern Illinois University	9	3	6 (Cultural Experience) 3 (Civilization)	6 (Behavior/interaction/well-being) 3 (US Constitution)	8	1 yr foreign language competency 2 Senior Seminar	40-46
Governors State University[1]	6		6	6	6 (includes math)	15 additional distribution	39
Northeastern IL University *Effective: Fall 1993*	3 (composition)	Competency *(Spring 1994)*	6 (fine arts) 9 (humanities)	12	12	Computer Literacy (*competency*) Human Relations (*competency*)	45
Western Illinois University *Effective: Fall 1994*	9	Competency	9	9	10 (includes math)	3 Multicultural Studies 3 Human Well-being	43
Illinois State University	9	3	9 (humanistic) 3 (aesthetic)	9	6	6 Contemporary Life Sudies 3 Non-Western	48
Northern Illinois University	9	3	9-12	6-9	7-11 (includes math)	3-6 Interdisciplinary	41
Sangamon State University[2]	6 (3 composition)	3	6	6	4	12 *Upper-division*	37
Southern IL at Carbondale *Effective: Fall 1996*	9	3	3 (fine arts) 6 (humanities)	6	6	3 Domestic Diversity 3 Integrative *(Upper-division)*	41
Southern IL at Edwardsville *Effective: Fall 1993*	6 composition plus 9-11 option[3]	3	3-6 introductory 3-6 advanced (9-12 total)	3-6 introductory 3-6 advanced (9-12 total)	3-6 introductory 3-6 advanced (9-12 total) (includes math)	6 Diversity (embedded) 3 Interdisciplinary *(Upper-division)*	48-50
University of Illinois/Chicago	6 (composition)		6	6	6	6 additional distribution	30
University of Illinois/Urbana *Adopted: Spring 1989*	3 (plus 3 embedded)	3 (plus 3 embedded)	9[4]	9[4]	9[4]	6 Western & Non-Western (embed) *3 sem. foreign language competency*[4]	42

[1]Governors State University is in process of adopting the Illinois General Education Core Curriculum as its general education program, effective 1996.
[2]As an upper-division university, SSU's lower-division general education requirements are minimum admission requirements.
[3]Option includes speech, foreign language, computer programming and statistics
[4]Not yet implemented

have yet to be implemented. Illinois State University began pilot testing a revised general education program with a select group of students entering in fall 1994. The results of the pilot test will determine the final structure of the revised program for campus-wide implementation. The all-campus general education program of the University of Illinois at Chicago is the smallest, with each constituent college adding its own requirements.

The universities' revised general education programs illustrate several trends that also are occurring nationally. First, greater emphasis is being placed on communication, mathematics, and critical thinking skills. All public universities require at least one course in composition, with most requiring two courses and a course in speech. All but one require at least one course in mathematics. In addition to prescribed courses, skills in writing, mathematics, and critical thinking are also stressed in other general education courses and in the major.

Second, courses providing multicultural perspectives have been incorporated into general education programs. Several universities require study of both Western and non-Western cultures, while others emphasize the range of diversity within the United States. These course requirements also fulfill Public Act 87-581 (September 1991) requirements that public institutions include "coursework on improving human relations" in their general education curricula. Third, in revising their general education programs, four public universities--Eastern Illinois University, Sangamon State University, and both campuses of Southern Illinois University--require that students complete an interdisciplinary or integrative capstone course during the senior year.

Finally, most public universities reduced the list of courses that can be used to fulfill general education breadth requirements in order to assure a more common experience and knowledge base. For example, Eastern Illinois University developed a limited number of new "core" courses specifically for the general education program. Northeastern Illinois University reduced its list of general education courses from 109 courses to 48, and Western Illinois University reduced its list down to 139 courses from 275, when it revised its general education program effective fall 1994.

The universities publish baccalaureate-level skills and general education objectives and requirements in their catalogs. The majority also are developing or have implemented computerized degree audit systems for both general education and program major requirements to provide students and their advisers up to date information on their progress toward baccalaureate degree completion. Several universities also established early warning or intrusive advising systems to alert freshmen to unsatisfactory progress early in their first semester so that they can seek academic assistance.

Assessment of Student Achievement

Both the 1986 and the revised 1990 policies asked colleges and universities to assess individual student progress in achieving objectives for general education and the development of baccalaureate-level skills in order to promote the success of all students. Table 2 shows the public universities' methods of assessing individual student achievement of these objectives.

Baccalaureate-level Skills Assessment. In their 1993 reports on their undergraduate education reviews, the public universities indicated they all assessed student achievement of basic skills, particularly in writing and mathematics, to determine appropriate course placement at entry to the university. The report on these 1993 reviews, *Undergraduate Education: Access and Preparation Reexamined* (March 1994), indicated that a higher proportion of entering assessed students were placed into remedial mathematics than remedial composition courses and that freshmen who had not completed the required four years of English and three years of mathematics for admission were more likely to be placed in remedial courses in these subjects than were students who had completed the required coursework. For the ten public universities that admit freshmen, this assessment occurs after freshman admission but prior to registration. While Governors State and Sangamon State

Table 2

PUBLIC UNIVERSITIES' ASSESSMENT OF STUDENT ACHIEVEMENT, 1994

	Student Assessment				Research Studies	
	Baccalaureate Skills	General Education	Surveys: Students	Surveys: Alumni	Group Success	Retention/ Graduation
Chicago State University			Withdrawing Graduating			Yes
Eastern Illinois University	Writing Exam (Jr Year)	*ACT–COMP* (sample) Sr Seminar Portfolios (planned)	Withdrawing Graduating	Yes		Yes
Governors State University*	Writing & Math Proficiency Tests Portfolios (planned)					
Northeastern Illinois University	Writing Exam Math Exam	Course Outcomes Required for Approval				
Western Illinois University	Writing Exam *ACT–CAAP* (Jr Year)	*ACT–CAAP* Faculty dev'd (pilot)	Graduating	Yes	Test Score Correlation Analysis	Yes
Illinois State University	Writing Exam (Jr Year)	*Standardized (sample)*	Yes	Yes	Acad Probation Special Admits Course–taking Patterns	Yes
Northern Illinois University	Common Comp Exit Exam Common Math Exit Exam (piloted)		Yes	Yes	Course–taking Patterns (planned)	Yes
Sangamon State University*	Entry & Exit Tests of 5 Skills		Yes		Transfer Preparation	
Southern Illinois University at Carbondale		Course Assessment Required for Approval		Yes		
Southern Illinois University at Edwardsville	Common Comp Exit Portfolio Rising Jr Paper Sr Assignment			Yes	Placement Follow Up	
University of Illinois/Chicago					Freshman Success Factors	Yes
University of Illinois/Urbana			Graduating	Yes		Yes

*Entry exams are for juniors in these upper-level baccalaureate universities.

Universities also assess students' skills at entry prior to registration, entering students are juniors and have usually completed at least one freshman composition course, and many have completed a full general education curriculum.

After entry, the most commonly assessed baccalaureate-level skill is writing, as shown in Table 2. Southern Illinois University at Edwardsville, Sangamon State University, and Western Illinois University have the most comprehensive baccalaureate-level skills assessment programs. Southern Illinois University at Edwardsville assesses student writing at multiple points: a common exit exam at the end of the freshman composition course sequence, a rising junior paper, and a senior assignment that also assesses students' critical thinking skills, accumulated knowledge, and, in some cases, oral communication skills. In its three years of experience with the rising junior paper, the campus found that about half the students did not meet the University's expectations. The most important result of this finding is the increased emphasis on writing across campus, with all but four departments identifying courses in which "good writing is a clear, explicit expectation." In addition, the Committee on Assessment is clarifying the evaluation of the junior rising papers to assure inter-reader reliability. The University's assessments of writing skills "elevated the...teaching of writing from 'someone else's job' to a responsibility that is now taken seriously by all departments on campus."

Sangamon State University assesses five essential skills (reading, writing, quantitative literacy, critical thinking, and library use) at entry to the university (junior year) and, beginning with the entry class of 1994, will assess these five skills again prior to graduation. In addition to its own writing exam required of all juniors, Western Illinois University administers the *Collegiate Assessment of Academic Proficiency (CAAP)*, developed by the American College Testing program, to juniors to compare their reading, writing, and math proficiency to the proficiency of a national sample of juniors. The students tested in 1993-94, on average, scored at national norms on each subtest.

Eastern Illinois University and Illinois State University also assess student writing skills in the junior year. Eastern Illinois University reported that in 1993-94, 87 percent of those tested passed. Northern Illinois University has a common examination at the end of the freshman composition sequence and has pilot tested common examinations in seven core mathematics courses. Governors State University requires entering students (usually juniors) to pass a proficiency exam in both writing and mathematics prior to enrolling in their third trimester. During 1993-94, the University reported that, on average, half the students tested passed the writing exam, while nearly two-thirds passed the mathematics exam. Northeastern Illinois University's competency exam in writing must be passed before a student earns 90 semester credits and the competency exam in math before a student earns 75 semester credits. Southern Illinois University at Carbondale suspended its common writing assessment due to lack of funds.

The universities' assessments of students' baccalaureate-level skills have resulted in changes in composition and mathematics requirements at four universities and to the implementation of writing, mathematics, and/or critical thinking "across-the-curriculum" programs either campus-wide or within one or more colleges in each public university.

General Education Assessment. While the majority of universities assess individual achievement of one or more baccalaureate-level skills beyond entry, few are directly assessing student achievement of general education objectives. As shown on Table 2, both Eastern and Western Illinois Universities administer standardized tests to a sample of students to assess their general knowledge as an external check on achievement. Illinois State University did so in the past but not since 1987. Also at Western Illinois University, the faculties in humanities, social sciences, and science/math developed and are pilot testing an assessment of general education in each area. Eastern Illinois University plans to evaluate students' ability to apply general education knowledge and skills as part of its required senior-year general education seminar but has not yet implemented this plan.

At Northeastern Illinois University, the General Education Committee evaluates the student learning outcomes and measures of assessment identified in the course syllabus, against the university's general education objectives to determine whether a proposed course can be used to fulfill general education requirements. Similarly, each course proposed for the revised general education program at Southern Illinois University at Carbondale must include an assessment plan and proficiency instrument for review before the course will be approved by the General Education Executive Council.

The rest of the universities have delegated the assessment of general education achievement, as well as achievement in a baccalaureate major, to constituent colleges and departments. While many departments and colleges have implemented assessments of writing and other skills, too frequently the assessment of student achievement of general education objectives has become confused with the assessment of achievement in the major field.

Surveys and Research Studies. Public universities also have conducted surveys and research studies to determine the effectiveness of their undergraduate programs, as also shown on Table 2. Most public universities survey current students and alumni for their evaluation of the general education they received at the university. Chicago State and Eastern Illinois Universities also survey withdrawing students. The primary usefulness of student self-assessment through surveys is in identifying those skills and areas of knowledge that students or alumni view positively or negatively. Often, however, a survey is too general to discriminate among different levels of achievement. For example, Sangamon State University found that its general education survey was "ineffective in assessing students' knowledge of public affairs issues and their awareness of various cultural issues," two key objectives of its general education program. The University concluded that a new assessment measure would be needed.

The most common research studies were retention through graduation studies of one or more entry cohorts. Findings from retention studies most often led to improvements in support systems in order to improve retention rather than to changed curriculum requirements. For example, the University of Illinois at Chicago developed a profile of at-risk students from its longitudinal study of freshman success. The profile led to a series of initiatives to improve student success: expansion of the number of course sections in composition, math, and other gateway courses; creation of a freshman orientation course to help students adjust to the rigor of the university environment; and establishment of an intrusive freshman advising program to prevent freshmen from taking certain high-risk courses in combination or too many math and science courses in the same term.

Chicago State University also reduced class sizes in English and math, and Chicago State University, Eastern Illinois University, and Northern Illinois University developed freshman orientation courses. Two universities created special programs for freshmen to involve students early in their learning and to reduce attrition: the Discovery program consisting of small seminars with senior faculty at the University of Illinois at Urbana-Champaign and the Learning Communities Initiative at Illinois State University.

Transcript analyses of student course-taking patterns, on the other hand, led to changes in curriculum requirements. Illinois State University's analysis of student course-taking patterns, for example, was one factor that led to the revised general education program currently being pilot tested. At Governors State and Sangamon State Universities, the analyses of entering student transcripts led to increases in requirements and revised entry skills assessments.

Public Community Colleges

General Education Curriculum

The Illinois Community College Board first adopted model requirements for the Associate in Arts (AA) and Associate in Science (AS) degrees in 1988, with revisions adopted in 1991. These

degree requirements specified a general education credit range between 38 and 50 semester credit hours. The general education requirements include courses in the baccalaureate-level skills of communications and mathematics, with the remainder of the credit hours distributed across the fields of science, social sciences, and the humanities. In its 1994 *Accountability and Productivity Report*, the Illinois Community College Board reported that all 49 community colleges met or exceeded the minimums specified in these requirements.

When fully implemented, the General Education Core Curriculum, developed as part of the Illinois Articulation Initiative and endorsed by the Illinois Community College Board and the Illinois Board of Higher Education in September 1994, will supersede the AA and AS degree model requirements for transfer purposes. The General Education Core Curriculum consists of 37 to 41 semester credit hours, and identifies the courses students may use to fulfill the requirements. By summer 1998, the target date for statewide implementation of the Curriculum, all community colleges will need to revise their general education requirements to meet or exceed the minimums in the Curriculum. At this time, several community colleges have already adopted requirements that meet these minimums.

The Illinois Community College Board has also adopted general education requirements for Associate in Applied Science (AAS) degree programs. In fiscal year 1994, the Community College Board replaced its previous "25 percent rule" with a "15-credit-hour rule," requiring a minimum of 15 semester credit hours in general education coursework in every AAS degree program. The requirements for most community college AAS degrees already meet this new minimum.

Assessment of Student Achievement

In summer 1994, the public community colleges submitted their undergraduate education review reports on general education and assessment of student achievement. Not all colleges provided comprehensive reports, however, and six colleges did not submit reports at all.

Entry-Level Skills Assessment. The January 1992 report, *Undergraduate Education: Teaching and Learning*, and the March 1994 report, *Undergraduate Education: Access and Preparation Reexamined*, revealed that the most highly developed community college assessments were of entry-level basic skills for appropriate placement into initial courses. The 1994 community college review reports confirm this continues to be true.

Most community colleges use either standardized or locally-developed entry-level assessment measures of baccalaureate skills. The typical standardized measure used was the *ASSET* test, with a handful of colleges using the ACT Math test, the *Computerized Placement Test*, *Accuplacer*, the *Nelson-Denny Reading Test*, and *Degrees of Reading Power*. Locally-developed tests were commonly used to assess writing proficiency. Several colleges also adopted or are piloting the *Collegiate Assessment of Academic Proficiency* (CAAP) to assess general education foundation skills. Most colleges have mandatory course placement policies based upon test results in reading, composition, and math.

Morton College made significant improvements in entry-level testing for non-native speakers of English that resulted in curriculum changes. Because faculty research revealed little correlation between students' standardized reading test scores and course grades, the faculty are considering the use of additional locally-developed and standardized test measures to better assess students' progress. Since the research revealed that a gap existed between the skills students exhibited when they finished remedial/developmental English and the skills needed for freshman English, the faculty revised the curriculum and set goals at each level of English instruction to construct a continuous program of English coursework from English as a Second Language through the second semester of freshman composition.

Beyond Entry-Level Skills Assessment. Entry-level assessment, however, is only the beginning. The Board's policies call for colleges to assess student achievement of baccalaureate-level skills during the collegiate experience. Assessment of communication skills beyond entry was the area addressed by the greatest number of colleges, with mathematical skills assessed by a few. Assessment of critical thinking skills was addressed by only seven of the 49 community colleges. The accompanying box illustrates some elements of assessment systems at community colleges.

EXAMPLES OF COMMUNITY COLLEGE
ASSESSMENT AND FEEDBACK SYSTEMS

College of DuPage in a faculty survey found that 86 percent of full-time and 74 percent of part-time faculty members used three or more measures to assess student learning in individual courses. The variety of measures used included: portfolios, capstone projects, interviews, student self-assessment, and both faculty-developed and standardized tests.

Heartland Community College combines standardized tests with such qualitative measures of student achievement as exit interviews, portfolios, and common, course-embedded test items to assess student learning gains in communication, cultural and global awareness, and problem-solving skills.

Moraine Valley Community College has pilot tested the use of student portfolios and the use of a locally developed pre-test/post-test to assess student achievement of general education objectives, is developing a student attitudinal questionnaire to measure the effect of general education course content and methods, and is attempting to link specific improvements in instruction, such as increased course writing assignments, to student achievement gains. The College employs a variety of intervention strategies linked to an Early Warning System to improve student success and retention.

McHenry County College uses a combination of quantitative and qualitative assessment measures: baccalaureate-level skills are assessed using a pre-test/post-test design, while achievement of general education objectives are assessed through focus group discussions involving both full-time and part-time students. A computerized degree audit system and weekly student withdrawal reports provide up to date information to academic administrators, faculty, and advisors.

Shawnee Community College surveys faculty members regularly to determine the extent to which multiple assessments of student achievement are used in individual courses and to determine how faculty members use assessment results in modifying courses. Faculty are portfolios and journals, capstone demonstrations, interviews, student self-assessment, research and group projects, and both faculty-developed and standardized tests to assess student achievement.

Waubonsee Community College uses multiple assessment measures such as written and telephone surveys of entering, currently enrolled, withdrawing, and graduating students and alumni; focus discussion groups; and pre-test/post-test measures of competency in study skills. The College also conducts interviews to assess the rate of student progress through courses and student integration into the college, and conducts follow-up surveys of students after transfer and analyzes after-transfer records from receiving institutions to assess program effectiveness.

Assessments of communication skills resulted in two distinct types of curricular improvements at several colleges. At Moraine Valley Community College, "time-on-task" measures were developed for communication skills by requiring all students in Composition II classes to write a series of five papers. "Quality-of-effort" improvements were emphasized at Truman College, with students now required to use research and evaluate source materials in advanced freshman composition. Communication skills are also assessed through departmental exit tests during the sixteenth week of

instruction, when impromptu themes are graded holistically by all members of the department. College faculty are also considering the use of portfolios to evaluate students' communication skills.

Explicit standards for communication skills were also set at Southeastern Community College, which requires ten formal, evaluated compositions and six oral presentations. Twenty courses in the general education curriculum require essay-type finals, and 30 courses require research papers. A recent Title II grant provided a specialist to assist faculty in incorporating measurable composition objectives in the 30 non-composition courses. At South Suburban College, communication skills are assessed through a pre-test/post-test process using alternate forms of the *ASSET* test. Videotaped presentations in speech classes are used to assess mastery of nine different learning outcomes.

At Kishwaukee Community College, the faculty reorganized objectives to assess general education by concept, rather than by department. The faculty identified appropriate measures at intervals throughout students' experiences to measure desired general education outcomes and then examined individual courses and modified objectives and material to conform to these outcomes and to establish assessment measures.

Writing-across-the-curriculum efforts were described in several of the colleges' reports. Beginning fall 1995, all courses approved for general education credit at Moraine Valley Community College must have a significant college-level writing component. Writing can be in a variety of forms and should include evidence of critical thinking, the development of analytical thought, and the use of deductive or inductive reasoning. Another writing-across-the-curriculum effort was undertaken at the College of Lake County, where a two-year faculty assessment project investigated writing samples from a variety of disciplines and developed college-wide criteria for evaluating writing. The results of that study revealed that although between 75 and 85 percent of students were writing at passable levels, most of the students wrote at the lowest passable level. As a result, the college developed criteria for successful writing, distributed a style sheet to support writing throughout the college, and started faculty discussions on how to strengthen writing across the curriculum.

Fewer colleges made progress in assessing achievement in math. College of Lake County faculty research projects revealed that students performed lower than expected on common exam questions for a general education mathematics course. This finding prompted improvements, such as allowing students to practice multiple-choice test-taking strategies in mathematics, analyzing the results of mathematics department finals for insight into student learning, and changing course content and pedagogy. To minimize grading differences among instructors, faculty at South Suburban College developed a common assessment instrument for each level of mathematics instruction.

Only seven colleges reported assessing student achievement of critical thinking skills. Oakton Community College has been a national leader of staff development projects to teach critical thinking skills. The college has held national conferences, provided workshops for faculty throughout the nation, held summer critical literacy seminars for faculty, and developed a seven-part video series on critical thinking. Wilbur Wright College is the only college that reported using a standardized test to assess student achievement of critical thinking skills. The college administers the *Watson-Glaser Critical Thinking* exam each spring to a random sample of students. Both Waubonsee Community College and Danville Area Community College are considering the use of a standardized test to measure critical thinking skills. Kishwaukee College set desired outcomes in critical thinking skills throughout the general education curriculum, and Richard J. Daley College added a specific course to teach critical thinking skills. Moraine Valley Community College incorporated critical thinking skills in its writing-across-the-curriculum program.

About half the colleges reported changes in advising and counseling practices as a result of both entry-level and after-entry skills assessment. William Rainey Harper College, Oakton Community College, McHenry County College, Triton College, and Waubonsee Community College all developed

computerized systems to monitor student performance at selected intervals, such as the 19th and 41st credit hours or continuously throughout a term. Faculty and students are thus alerted to academic and attendance problems at strategic points to allow for appropriate intervention strategies.

General Education Assessment. Few colleges have implemented student outcomes assessment measures in general education subject areas. At Kankakee Community College, members of the Instructional Council have taken a critical first step by proposing a review of recent graduates' transcripts in order to determine which courses are actually being used to fulfill general education requirements. At Black Hawk College, faculty and administrators identified six major abilities that baccalaureate students should possess upon completion of general education requirements, with seven to ten measurable outcomes identified for each ability.

South Suburban College assesses achievement in the various humanities subjects through multiple methodologies--faculty-developed common exams, pre-test/post-test assessments, and portfolios--and is establishing assessment methods for the natural sciences and the social and behavioral sciences. During Phase II of the college's assessment plan, faculty will use assessment information to make decisions about course content, develop or modify curriculum, change classroom instructional strategies, change testing and grading procedures, and enhance library holdings and instructional equipment. At College of Lake County, assessment in humanistic studies, science, and social science has been underway since 1989-90, through evaluation of samples of student work in general education courses and on common final exams. Triton College developed a formal assessment plan that requires each of 30 arts and sciences disciplines to assess all multi-section general education courses. Pre-test/post-test measures are normally used to assess both skills and content, and curricular improvements are planned based upon assessment results.

At College of Lake County, after-transfer performance data are also analyzed for a sample of students to determine how well general education coursework at the college has supported student performance in further education. A number of faculty research projects in writing-across-the-curriculum, mathematics, science, and humanities have led to curricular improvements based upon after-transfer assessment results.

One difficulty in assessing student achievement of general education objectives is that unless students are enrolled in the AA or AS degree program, their educational achievement is often not tracked. Kishwaukee College initiated an on-line student audit system to track achievement of students who take general education courses but are not enrolled in a degree program. Since some occupational students also transfer to baccalaureate programs, tracking their achievement of general education objectives is as important as tracking the achievement of the traditional transfer student.

In 1985, Alexander Astin proposed a talent-development or value-added model of assessment, suggesting further that primarily commuter institutions, such as community colleges, are ideally positioned to gain from such a model. This model employs a pre-test/post-test methodology to compare what students know at college exit to what students knew at entry to measure gains in knowledge and skills as a result of the college experience. The College of Lake County, South Suburban College, and Triton College all implemented pre-test/post-test assessment processes similar to those suggested by the value-added model.

Conclusions

This report analyzed public university and community college efforts to assess individual student achievement of baccalaureate-level skills and general education objectives as called for in the Board of Higher Education's policies on student achievement, scholarship, and general education, adopted in September 1986. Information was drawn from the reports on this topic submitted by each campus in summer 1994 as part of the campus' RAMP submission. Colleges and universities were specifically asked to report on their objectives for baccalaureate-level skill development and general education,

how these objectives were reflected in curriculum requirements, the methods they used in assessing individual student achievement of these objectives, the results of assessment, and how the results were used to make improvements in curriculum and support services.

This analysis showed that recently revised public university general education curricula give greater attention to students developing baccalaureate-level skills in communication, mathematics, and critical thinking than did the general education programs they are replacing. All universities require at least one course in English composition, with most requiring more than one, and many also require at least one course in speech. All universities but one require at least one course in mathematics, with two universities requiring two courses and three permitting additional mathematics courses within their distribution or breadth requirements. The majority have initiated writing, mathematics, or critical thinking across-the-curriculum programs to emphasize that helping students develop these skills is a responsibility of all faculty members and not the sole province of a single department.

Recently revised public university general education curricula are also more focused through restrictions on the number of courses allowed to fulfill the distribution or breadth portion of requirements. In addition, revised general education requirements explicitly incorporate the perspectives of diverse cultures in the United States and from other countries, and some recognize the growing need to examine issues across disciplines.

The general education requirements for community college AA and AS degrees also require courses in the baccalaureate-level skills of communication and mathematics, as well as courses selected from the humanities, social sciences, and natural sciences. Since the Illinois Community College Board model degree requirements and the newly developed General Education Core Curriculum were both developed by examining the variety of general education programs at baccalaureate degree-granting institutions across the state, the community colleges' general education requirements are similar to the requirements of public universities.

In keeping with their new emphasis on skill development, the most well developed component of the public universities' systems for assessing student achievement beyond university entry is the assessment of writing skills. Seven universities reported they assess students' writing skills at least once beyond university entry. That the universities believe the improvement of students' writing and mathematical skills is important is further attested to by the number of universities that reallocated resources to implement increased requirements, to expand the number of sections offered in foundation composition and math courses, to reduce class size, and to provide supplemental instruction, tutoring, and other assistance to students in these skill areas.

At this point, however, only three universities have begun to assess student achievement of general education distribution or breadth objectives. Of the remainder, one university has developed a plan to do so, and four universities reported that while they did not currently have a systematic general education assessment plan, they intended to develop one during 1994-95 in response to or preparation for North Central Association accreditation visits.

Among the public community colleges, only 30 percent implemented comprehensive assessment systems that employ multiple methods, both quantitative and qualitative, to assess what their students learned during college and used student assessment results to improve curriculum and support services. An additional 23 percent of the colleges assessed student achievement at entry, but did little to go beyond standard indicators of achievement, such as transfer and persistence rates and grade distributions, to assess achievement after entry. Fully 35 percent had not implemented the Board's policies on assessment, although a few reported that more comprehensive assessment methods were planned. Finally, 12 percent, six colleges, did not submit a report or submitted one so brief that no information on assessment was provided.

Few colleges and universities reported using qualitative assessments, such as demonstrations, portfolios, or focus group interviews. While qualitative measures can be time-consuming to gather and analyze, they provide insight into students' gains in skills and knowledge that quantitative measures do not. Bers and Mittler make the case that both quantitative and qualitative measures are necessary and note that institutions that use both will gain better understanding from assessment and will consequently serve students better (1995, page 67). In addition, few colleges and universities reported using multiple measures to assess student learning of a single skill or general education field of study.

The public universities and community colleges that are making progress in assessing student achievement of baccalaureate-level skills and general education objectives approached assessment in a comprehensive, rather than piece-meal, fashion. While a third of Illinois' public universities and community colleges have developed and are implementing comprehensive assessment systems using multiple methodologies, the majority have not yet begun to assess baccalaureate-level skills beyond college entry; to assess general education learning in humanities, science, and social sciences; or to use the results of individual student assessment to improve students' learning and make curricular or other improvements to the undergraduate experience of their students. The majority of community colleges and public universities continue to use only standard indicators of student achievement--such as course grades and retention, transfer, and graduation rates.

A number of colleges and universities appear to view the assessment of student achievement as a process imposed on them either by the North Central Association or by the Board of Higher Education, rather than as an integral part of academic life that allows the institution to evaluate how well its students are achieving and, thus, how well the institution is fulfilling its purpose. Some colleges and universities seemed to miss the mark entirely. In several reports, the emphasis was on faculty and the teaching process rather than on students and the learning process. As recently noted by James Palmer, colleges and universities have a "tendency...to formulate goals as statements of process, indicating what staff will do, rather than as statements of outcomes, indicating the results to which staff actions will lead" (1994, page 50).

The Board of Higher Education's policies on student achievement, scholarship, and general education calling for colleges and universities to implement comprehensive systems to assess individual student achievement were adopted in September 1986. The public universities and community colleges, thus, have had eight academic years in which to develop and implement such systems. To date, only three public universities and a third of the community colleges have done so.

In October 1991, the Board of Higher Education began the Priorities, Quality, and Productivity (P•Q•P) initiative by asking colleges and universities and their governing boards to set priorities in order to strengthen the quality and improve the productivity of Illinois higher education. Throughout the intensive P•Q•P review and reallocation process, the Board focused on statewide priorities, including the improvement of undergraduate teaching and learning. Initially the Board focused on improving the quality and productivity of individual academic programs, units, and functions.

In November 1994 (*Priorities, Quality, and Productivity of Illinois Higher Education: Summary and Assessment for 1993-94 and Recommendations for 1994-95*), the Board asked campuses and governing boards to examine the academic quality and productivity of colleges and universities, including the quality of student learning at each, during 1994-95 and to report their findings and actions in August 1995. Colleges and universities that have not developed and implemented comprehensive assessments of individual student achievement will have considerable work to do.

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APPENDIX A

BOARD OF HIGHER EDUCATION POLICIES
ON STUDENT ACHIEVEMENT, SCHOLARSHIP, AND GENERAL EDUCATION
September 1990

To enhance the undergraduate educational experience, colleges and universities should promote excellence in undergraduate teaching, interaction between faculty and students, student involvement in and commitment to learning and academic achievement, and the centrality of general education to baccalaureate education.

Colleges and universities shall define the objectives of the general education and the program major portions of the undergraduate curriculum and expectations for the development of baccalaureate-level skills, establish time frames for students to achieve these objectives and expectations, and communicate to students the rationale for and importance of these objectives and expectations. Student responsibilities in achieving these objectives and expectations should be emphasized in academic advising.

Colleges and universities shall conduct regular reviews of the undergraduate educational experience. These reviews shall include the undergraduate curriculum (general education, program majors, and the development of baccalaureate-level skills) and the quality of teaching and the learning environment, academic and student support services, and institutional policies and procedures affecting undergraduate students. The findings and conclusions of these reviews shall be reported to the Illinois Board of Higher Education.

Each college and university shall assess individual student progress in achieving its objectives for general education, the major, and the development of baccalaureate-level skills in order to promote the success of all students. It is expected that colleges and universities will assess student progress at appropriate intervals and that assessment results will be used to reinforce the maintenance of academic standards and to improve the undergraduate educational experience. The results of the assessment of student progress shall be incorporated into program review.

The statewide system for monitoring the academic progress, retention, and completion of cohorts of undergraduate students should be continued by the Illinois Board of Higher Education in cooperation with colleges and universities. This information should serve as the basis for the regular review and improvement of the undergraduate curricula and support services of colleges and universities.

The Illinois Board of Higher Education will use institutional trends in student progress, retention, and completion; campus-level reviews of the undergraduate educational experience; and other information to monitor statewide trends in student achievement in, resource commitments to, and program quality results of undergraduate education. In cooperation with colleges and universities, the Illinois Board of Higher Education will use these state-level analyses to make necessary modifications in state policies on undergraduate education.

APPENDIX B

THE NATIONAL EDUCATION GOALS*

By the Year 2000:

- All children in America will start school ready to learn.
- The high school graduation rate will increase to at least 90 percent.
- All students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy.
- United States students will be first in the world in mathematics and science achievement.
- Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

  Objective 1: Every major American business will be involved in strengthening the connection between education and work.

  Objective 2: All workers will have the opportunity to acquire the knowledge and skills, from basic to highly technical, needed to adapt to emerging new technologies, work methods, and markets through public and private education, vocational, technical, workplace or other programs.

  Objective 3: The number of quality programs, including those at libraries, that are designed to serve more effectively the needs of a growing number of part-time and mid-career students will increase substantially.

  Objective 4: The proportion of those qualified students (especially minorities) who enter college, who complete at least two years, and who complete their degree programs will increase substantially.

  Objective 5: The proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems will increase substantially.

- Every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.
- The Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.
- Every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

* The first six goals were adopted by the President and the 50 Governors following the education summit of November 1989. The seventh and eighth goals were added when the National Education Goals were adopted and signed into law -- *Goals 2000: Educate America Act* -- in March 1994.